Title (en)
Downhole processing of sonic waveform information.

Title (de)
Verarbeitung im Bohrloch von Schallwellenforminformation.

Title (fr)
Traitement en fond du puits de l'information de form d'onde sonore.

Publication
EP 0660136 A2 19950628 (EN)

Application
EP 94309270 A 19941212

Priority
US 17056793 A 19931220

Abstract (en)
Methods for processing sonic logging data obtained by a sonic imaging tool or an MWD tool are provided. The sonic logging data are bandpass filtered and sampled according to techniques such as integer band decimation, quadrature modulation, and single side band modulation to provide compressed signals which can be reconstructed if desired. The compressed signals are alternatively stored for downloading and further processing, sent uphole for processing, or processed downhole. The processing preferably involves processing the analytic portion of the compressed signals according to an improved semblance processing technique where the semblance function is calculated over a time window utilizing coarse slowness and time sampling steps. The slowness and time sampling steps are dictated by the parameters of the bandpass filter and the inter-receiver spacing of the tool. The waveform for each receiver is preferably interpolated based on the time step size to provide those data points necessary for stacking. From the determined semblance peaks, or interpolation thereabout, the formation slowness is derived. <IMAGE>

IPC 1-7
G01V 1/48

IPC 8 full level
G01V 1/48 (2006.01)

CPC (source: EP US)
G01V 1/48 (2013.01 - EP US)

Cited by
GB2354325A; GB2354325B; CN110398732A; GB2418986A; GB2418986B; FR2799552A1; AU700974B2; GB2307833B; US6104982A; US6370477B1; US6366531B1; US6213250B1; US6564899B1; US11649717B2; WO0003269A1; WO9721115A1; WO9728464A1; US6693554B2; US6747570B2; US6987463B2; US7046165B2; US7173542B2

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